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7590 Ryan, Mason & Lewis, LLP 90 Forest Avenue Locust Valley, NY 11560				
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SILVER, DAVID				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/722,651

Applicant(s)

KHAN ALICHERY ET AL.

Examiner

DAVID SILVER

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9, 11 and 14-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-9 and 11-29 were originally presented for examination.
2. Claims 1-9 and 11-29 were rejected.
3. Claims 1-9 and 11-29 are currently pending in Instant Application.
4. The Instant Application is not currently in condition for allowance.

Priority

5. Priority is not claimed (**11/26/03**).

Response to Arguments

Response: 35 U.S.C. § 101

6. Examiner Response:

- 6.1 Applicants' amendments are not sufficient to overcome the 35 U.S.C. § 101 rejection of claims 1-9 and 11-29. Specifically, claim 1 remains drawn to subject matter which does not have a practical application, nor produces a final result that is tangible. The conclusionary statement that specifying a line system is considered tangible concrete and useful is, at best, a general allegation, and is therefore unpersuasive. Further, although the steps of the claimed method are performed by a computer, the claimed invention remains without a statutory result. See MPEP 2106.01, which recites: "Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See >Diamond v. < Diehr, 450 U.S. *>175,< 185-86, 209 USPQ *>1,< 8 (noting that the claims for an algorithm in Benson were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.")." In the case of the Instant Claims, the abstract idea is the representation of a bandwidth / demand as a line system. The claimed invention are not drawn to a practical application.
- 6.2 Claims 8, 11, and 15, 22, 25, and 29 and their dependents remain drawn to non-statutory subject matter for the reasons set-forth above.

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Response: Claim Objections**7. Examiner Response:**

7.1 Applicants are thanked for amending the claims. Claims objections have been withdrawn in view of properly amended claims which overcome the specified deficiencies.

Response: 35 U.S.C. § 112**8. Examiner Response:**

8.1 Applicants are thanked for explaining the definitions of the terms in questions. The 35 U.S.C. § 112 rejections have been withdrawn in view of the remarks and the amendments.

Response: 35 U.S.C. § 102**9. Examiner Response:**

9.1 Applicants' arguments are unpersuasive per the Claim Interpretation section below. Specifically, Applicants' arguments regarding claim 1, 15, and 29 are unpersuasive in view of the claim interpretation. Specifically, the "Wherein" clauses of, for example, claim 1 (see Claim Interpretation section below), were not given patentable weight.

9.2 Claims 8, 11, 22 and 25 are indicated as having allowable subject matter. The reasons for allowance have been set forth in Office Action dated 6/27/2007 section #10.

Claim Interpretation**MPEP 2111.04 [R-3] "Adapted to," "Adapted for," "Wherein," and "Whereby" Clauses**

Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. However, examples of claim language, although not exhaustive, that may raise a question as to the limiting effect of the language in a claim are: (A) "adapted to" or "adapted for" clauses; (B) "wherein" clauses; and (C) "whereby" clauses. The determination of whether each of these clauses is a limitation in a claim depends on the specific facts of the case. In *Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329, 74 USPQ2d 1481, 1483 (Fed. Cir. 2005), the court held that when a "whereby" clause states a condition that is material to patentability, it cannot be ignored in order to change the substance of the invention." Id. However, the court noted (quoting *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381, 67 USPQ2d 1614, 1620 (Fed. Cir. 2003)) that a "whereby clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited." Id. < (emphasis added)

10. In view of the MPEP citation above and further consideration of claims, it is determined that the "wherein" clauses are merely intended use as they do not positively recite neither structural nor functional limitations. The wherein clauses reciting the measurement of big-oh notation are

analogous to having a claim with a wherein clause reciting that something is measurable with inches, light-years, etc. Accordingly, unless the actual structure of function that requires the measurement is recited, the wherein clauses are not given patentable weight. Specifically, "wherein the one or more demands comprise one or more bandwidth requests", and "wherein colors represent bandwidths such that bandwidths are assigned and the one or more demands are routed so as to attempt to achieve a minimum total design cost" are not given patentable weight in view of MPEP 2111.04 and should be recited as positive step language in order to necessitate function and further limit the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

MPEP 2106.01 recites, in part:

When a computer program is claimed in a process where the computer is executing the computer program's instructions, USPTO personnel should treat the claim as a process claim. ** When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim.

- 11.1 Regarding claims 15, 22 and 25, in view of MPEP 2106.01 citation *supra*, the statutory category of the claims is unknown and is therefore drawn to non-statutory subject matter. Specifically, the claims recite deficiency: being "configured to" neither stores, nor executes the software instructions but merely recites intended use (functional descriptive subject matter neither being executed by a processor nor stored on a memory), which is not given patentable weight. See MPEP 2111.04.

MPEP 2106 recites, in part:

"...USPTO personnel shall review the claim to determine it produces a useful, tangible, and concrete result. In making this determination, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the *final* result achieved by the claimed invention is "useful, tangible, and concrete." (emphasis added)

- 11.2 Regarding claim 1, 8, and 11, the "method" claims do not produce a useful, tangible, and concrete **final** result. The claims are additionally not drawn to a practical real-world application but merely an abstract idea. The claimed representation is not limited to a tangible, concrete, and useful final result. Furthermore, it is unclear where the "representation" takes place or if it is even result or

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merely an internal representation which is just an abstract mathematical calculation.

Furthermore, the claimed steps are merely software processes as disclosed in the Spec PGPUB (**para 97**): “.

Therefore, additionally deficiency recited above, the statutory category for the claims is unknown.

See MPEP 2106.01, which recites: “Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See >Diamond v. Diehr, 450 U.S. *175, < 185-86, 209 USPQ *1, < 8 (noting that the claims for an algorithm in Benson were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).”

12. Claim 29 is deficient for the above reasons and MPEP 2106.01 (partially recited above).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-7, 9, 14-21, 23-24, 26-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Arquie (**US 20040061701**).

(Claim language that is *italicized* has been interpreted as being drawn to intended use and is not given patentable weight. Such formatting is merely exemplary and not exhaustive. See MPEP 2111.04 and Claim Interpretation section above.)

Arquie discloses: 1. A method of designing a line system, the method comprising the steps of:

obtaining a set of one or more demands *for use in computing the line system design*, wherein the one or more demands comprise one or more bandwidth requests (para 38); and

representing the line system design as a graph in accordance with a graph coloring operation wherein colors represent bandwidths such that bandwidths are assigned and the one or more demands are routed *so as to attempt to achieve a minimum total design cost*; specifying a line system design based on the assigned bandwidths and the routed demands (**para 13 “adding color [] such that particular performance ranges are essentially color-coded.”**).

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Arque discloses: 2. The method of claim 1, wherein colors are partitioned in sets and the sets are ordered so that colors in higher sets cost more than colors in lower sets (**para 13 "adding color [] such that particular performance ranges are essentially color-coded."**).

Arque discloses: 3. The method of claim 2, wherein a link of the graph represents a location of a component of the line system being designed (**Fig 6, 7 and description**).

Arque discloses: 4. The method of claim 3, wherein the cost of a link in a coloring is equal to the cost of the most expensive set such that a demand going through the link is colored with a color in the most expensive set (**para 57 -"The selected "device" for such monitoring can simply be the one with a selected amount of traffic (such as "show me the highest (lowest or other ranking) device and contributors")."**).

Arque discloses: 5. The method of claim 3, further wherein colors are assigned to the demands such that no two demands routed on the same link of the graph are assigned the same color (**para 53, 57**).

Arque discloses: 6. The method of claim 1, wherein the line system being designed is a linear line system (**para 12, Fig 4 exemplary item 435/434 and description**).

Arque discloses: 7. The method of claim 6, further comprising the step of representing the line system design by an interval graph (**Fig 4, 5, 6, 7 and descriptions**).

Arque discloses: 9. The method of claim 1, further comprising the step of polynomially computing the graph coloring operation (**Fig 7 - Legend**).

Arque discloses: 14. The method of claim 1, wherein the line system being designed is an optical line system (**para 27 "includes connection infrastructure that is usually standards-based, such as based on the Fibre Channel standard, and includes optical fiber"**).

As per claims 15-21, 23-24, 26-28, note the rejection of claims 1-7, 9, 14 above. The Instant Claims recite substantially same limitations as the above-rejected claims and are therefore rejected under same prior-art teachings.

As per claims 29, note the rejection of claims 8, 11 above. The Instant Claims recite substantially same limitations as the above-rejected claims and are therefore rejected under same prior-art teachings.

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Allowable Subject Matter

14. Claims 8, 11, 22, and 25 are indicated as having allowable subject matter. The reasons for allowance have been set forth in Office Action dated 6/27/2007 section #10. Claims mentioned above would be allowable if rewritten or amended to overcome all of the applied rejection, set forth in this Office action.

Support for Amendments and Newly Added Claims

Applicants are respectfully requested, in the event of an amendment to claims or submission of new claims, that such claims and their limitations be directly mapped to the specification, which provides support for the subject matter. This will assist in expediting compact prosecution. MPEP 714.02 recites: "Applicant should also specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06. An amendment which does not comply with the provisions of 37 CFR 1.121(b), (c), (d), and (h) may be held not fully responsive. See MPEP § 714." **Amendments not pointing to specific support in the disclosure may be deemed as not complying with provisions of 37 C.F.R. 1.131(b), (c), (d), and (h) and therefore held not fully responsive.** Generic statements such as "Applicants believe no new matter has been introduced" may be deemed insufficient.

Conclusion

15. All claims are rejected.
16. The Instant Application is not currently in condition for allowance.
17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

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action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 10am to 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

/DS/
David Silver, Patent Examiner
Art Unit 2128